



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,821	03/15/2004	Kerry Dennis Brown	MLF 670-03	1621

26329 7590 09/29/2009

Richard Brewster Main, Esq.
Patents Pending
9832 Lois Stiltner Court
Elk Grove, CA 95624

EXAMINER

NILFOROUSH, MOHAMMAD A

ART UNIT	PAPER NUMBER
----------	--------------

3685

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

09/29/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mainpatents@gmail.com
rbmain@frontiernet.net
rbmain@mainpatents.com

Office Action Summary	Application No. 10/800,821	Applicant(s) BROWN, KERRY DENNIS	
	Examiner Mohammad A. Nilforoush	Art Unit 3685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-26, 28-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-26, 28-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgements

1. The amendment filed 7 May 2009 is acknowledged.
2. Claims 22-26 and 28-29 are pending.
3. Claims 22-26 and 28-29 have been examined.
4. This Office action is given Paper No. 20090912 for reference purposes only.

Response to Amendment/Arguments

5. Applicant's claims have been amended to recite language that does not serve to differentiate the claims from the prior art.
6. Claims 28 and 29 recite "constructing...*to combine* permanent data bits and programmable data bits from parallel fixed-position magnetic-transducer write heads on one side of a thin, planar magnetic stripe, and a moving serial read head on the opposite side that resembles a parallel-in, serial-out shift register..." This recites the intended use or result of the "constructing" step. Similarly, claims 28 and 29 recite "...sending...*to be* encoded as said programmable bits on said magnetic stripe..." This recites the intended use of the unique transaction encoding. Additionally, claim 29 recites "...for detecting and triggering said data generator in contact with said moving serial read head in a legacy card reader..." This recites the intended use of the "card-swipe detector". The recitation of the intended use of the claimed invention does not serve to differentiate the invention from the prior art. MPEP §2106 II C states that language that suggests or makes optional but does not require steps to be performed or

Art Unit: 3685

does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. An example of such language includes statements of intended use or field of use (MPEP §2106 II C). Further, regarding claim 29, while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function alone (MPEP 2114; *In re Swineheart*, 169 USPQ 226; *In re Schreiber*, 44 USPQ2d 1429 (Fed. Cir. 1997)).

7. Applicant's arguments filed 7 May 2009 have been fully considered but they are not persuasive.

8. Applicant states that "...the Office Action skips over mentioning the permanent data bits are intermixed and combined with programmable data bits from the write heads. So in context, the step of controlling does not include controlling the permanent data bits..." Further, regarding the use of Col. 11, lines 26-38 and col. 12, lines 1-7 of Geiselman to disclose a combination of permanent and programmable bits disclosed in Geiselman, Applicant asks "How exactly does the Office conclude from this 'a card with a magnetic stripe that includes a linear combination of programmable and permanent data bits'"

9. Examiner notes that the previous Office Action acknowledges that Cooper discloses a magnetic stripe consisting only of programmable data bits. Thus, Examiner relies on the Geiselman reference for its disclosure of a magnetic stripe with permanent bits combined with one or more programmable bits. Geiselman discloses, in col. 11, lines 26-38 and Figure 3, a card 70 "...that makes use of conventional magnetic media

Art Unit: 3685

supplemented with at least one electronically generated bit of information. This electronically generated bit may occur anywhere in magnetic strip 72, including region 78 containing a cyclic redundancy check or other verification code such as a check bit system, the region 80 containing an identification number, the region 82 containing the transaction specific code, or any other region. Further, the electronically generated bit may comprise its own region 84..." Thus, Geiselman discloses a card 70 with a magnetic strip 72 comprising multiple regions containing data, such as regions 78, 80 and 82. At least one bit of the data in these regions may be electronically generated. Thus, the static data in these regions include at least one bit that is electronically generated, such that "[w]hen the electronically generated bit is inactive (not energized), reading the magnetic strip will indicate that a bit is missing...and that the card is damaged, ineffective, or unauthorized" (Col. 11, lines 64-67). Col. 12, lines 1-7 disclose that any number of bits may be electronically generated.

10. Applicant also argues "Cooper does not ever mention 'triggering', 'legacy card readers', 'swiping' nor 'read head'. Cooper says the loading of a pattern can occur after insertion of the card." Further, regarding the use of Singh to disclose a swipe detector, Applicant asks "[h]ow is deactivating the magnetic strip relevant to triggering the data generator to send a unique transaction encoding?"

11. Examiner notes that Cooper was relied on for disclosing the loading of a magnetic strip with data upon insertion of the card in a reader as recited in col. 3, lines 43-47. The 'triggering' occurs when insertion of the card is sensed (Cooper states "...or only *upon* or after insertion of the card...") and the pattern is loaded, the 'legacy card

Art Unit: 3685

reader' is the device which uses the card, further described in col. 3, lines 23-27 and col. 5, lines 51-64, and the 'swiping' is the insertion of the card in the device, further described in col. 5, lines 51-64. The 'read head' is part of the device which uses the card and is also described in col. 5, line 51-64 (magnetic sensor). Singh was relied upon to show a card-swipe detector proximate to the magnetic stripe, not the act of 'triggering' which was disclosed in Cooper.

12. Applicant also states "... So without any objective reason to do so, the Office selected Geiselman and Singh to supply the missing parts... The Office is bootstrapping, and using hindsight provided by the Present Application. No objective reason has been offered as to why an artisan would have seen beforehand to add the teachings of Geiselman and Singh to Cooper. The Office has failed to make a prima facie case of obviousness."

13. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

The motivation to combine Cooper and Geiselman is found in Geiselman (Col. 11, ll. 64-67) and the motivation to combine Cooper in view of Geiselman with Singh is

Art Unit: 3685

found in Cooper and Singh (Cooper, col. 3, ll. 43-47; Singh Paragraph 13).

14. Applicant also states "But Geiselman doesn't even involve payment cards, it's directed to a method and apparatus for securing digital communications. The relevance of Geiselman is being stretched to support the 35 USC 103(a) rejection."

15. In response to applicant's argument that Geiselman is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Examiner notes that Geiselman discusses a credit card and credit card use from col. 10, line 63 to col. 12, line 46 as well as in col. 14, line 46 to col. 15, line 7. Thus, as Geiselman is in the applicant's field of endeavor and pertinent to the problem with which applicant was concerned, it is relevant prior art.

16. Therefore, Examiner maintains the rejections under 35 USC §103.

Claim Rejections - 35 USC § 112, 1st Paragraph

17. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

18. Claims 22-26 and 28-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably

Art Unit: 3685

convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

19. Specifically, claims 28 and 29 recite "...detecting and triggering said data generator with a card-swipe detector proximate to said magnetic stripe in contact with said moving serial read head in a legacy card reader..." The description of the card-swipe detector in the specification reads "[0032] Card-swipes generate detection sensing signals from one or a pair of detectors 206 and 208. These are embedded at one or each end of magnetic stripe 202 and can sense the typical pressure applied by a magnetic read head in a scanner..." This does not provide support for the multiple functions of detecting and triggering as presently claimed.

Claims 22-26 are also rejected as each depends on claim 28.

Claim Rejections - 35 USC § 112, 2nd Paragraph

20. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

21. Claims 22-26 and 28-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

22. Claims 28 and 29 recite "...constructing a single series of magnetic data on a magnetic stripe of a payment card...from parallel fixed-position magnetic-transducer write heads on one side of a thin, planar magnetic stripe and *a moving serial read head on the opposite side that resembles a parallel-in, serial-out shift register...*" The claims

Art Unit: 3685

later recite "...in contact with said moving serial read head in a legacy card reader..." It is unclear to one of ordinary skill in the art whether the "moving serial read head" is located on the card or in the legacy card reader.

An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed (*In re Zletz*, 13 USPQ2d 1320 (Fed. Cir. 1989)).

Claims 22-26 are also rejected as each depends on claim 28.

Claim Rejections - 35 USC § 103

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

24. Claims 25 and 28-29 rejected under 35 U.S.C. 103(a) as being unpatentable over Cooper (US Patent No. 5,834,747) in view of Geiselman et al. (US Patent No. 6,466,780, hereinafter "Geiselman") and further in view of Singh (US Patent Application Publication No. 2002/0032657).

25. Regarding claims 28 and 29, Cooper discloses a payment card and a method for operating the payment card, comprising:

- constructing a single series of magnetic data on a magnetic stripe of a payment card consisting of programmable data bits from parallel fixed-position magnetic-transducer write heads on one side of a thin, planar magnetic stripe and a

Art Unit: 3685

moving serial read head on the opposite side that resembles a parallel-in, serial-out shift register (Figure 2, programmable magnetic strip 4 on plastic substrate 3, col. 2 ll. 45-62; col. 3, ll. 6-19; col. 4 ll. 26-29, 34-47, data output to strip in parallel; col. 5, ll. 21-26, 44-63, data read from strip linearly; Figure 4, magnetic strip 10, electromagnet coils 21, col. 7 ll. 5-38);

- controlling said programmable data bits with a data generator and said magnetic-transducer write heads located immediately under corresponding bit positions of said magnetic stripe (col. 3, ll. 14-27; col. 4 ll. 26-47; col. 5, ll. 21-26; col. 6, ll. 54-61; Figure 4, magnetic strip 10, electromagnet coils 21, col. 7 ll. 5-38);
- detecting and triggering said data generator when swiped by a read head in a legacy card reader (col. 3, ll. 43-47; col. 5, ll. 51-64);
- sending a unique transaction encoding from said data generator to said magnetic-transducer write heads to be encoded as said programmable bits on said magnetic stripe (col. 3, ll. 14-27; col. 5, ll. 51-56; col. 6, ll. 51-61);
- wherein, said unique transaction encoding is magnetically readable by legacy card reader via said programmable data bits encoded on said magnetic stripe for only a limited time or a limited number of card swipes or transactions (col. 3, ll. 43-47; col. 6, ll. 51-57).

Cooper does not specifically disclose that the series of magnetic data on the magnetic stripe combines permanent data bits along with the programmable data bits disclosed in Cooper. Cooper further does not specifically disclose a moving serial read head on the opposite side of the magnetic stripe that resembles a parallel-in, serial-out

Art Unit: 3685

shift register. Also, although Cooper states that the card is able to detect when a card is swiped through a card reader, Cooper does not explicitly state that the card has a card-swipe detector proximate to said magnetic stripe in contact with said moving serial read head in a legacy card reader.

Geiselman discloses a card with a magnetic stripe that includes a combination of programmable and permanent data bits (Figures **3-5**; col. **11**, ll. **26-38**; col. **12**, ll. **1-7**, **28-30**).

Cooper in view of Geiselman does not explicitly state that the card has a card-swipe detector proximate to said magnetic stripe in contact with said moving serial read head in a legacy card reader.

Singh discloses a card with a card-swipe detector proximate to the magnetic stripe that can detect when a card enters a magnetic field for reading (Figure **2**, Swipe Detector **6**; Paragraphs **13**, and **16-17**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the magnetic stripe on the payment card of Cooper to include a linear combination of programmable and permanent data bits as disclosed in Geiselman in order to prevent a card with an account number stored permanently on the magnetic stripe from being used by an unauthorized individual (Geiselman, Col. **11**, ll. **64-67**)

Further, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the payment card of Cooper in view of Geiselman to include a card-swipe detector proximate to the magnetic stripe as disclosed in Singh in order to output

Art Unit: 3685

data on the magnetic stripe only when the card is being swiped (Cooper, col. **3**, ll. **43-47**; Singh Paragraph **13**).

26. Regarding claim 25, Geiselman discloses requiring a user to enter a personal identification number (PIN) before allowing said unique transaction encoding to be accessed by said legacy card reader (col. **11**, ll. **1-9**).

27. Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cooper in view of Geiselman, in further view of Singh, and further in view of Kreft, et al. (US Patent No. 6,068,193, hereinafter "Kreft").

28. Regarding claims 22 and 23, Cooper in view of Geiselman in further view of Singh does not specifically disclose collocating a smartcard contact interface or a wireless smartcard contactless interface with said single series of magnetic data on a magnetic stripe within said payment card.

Kreft discloses a payment card with a magnetic stripe and a smartcard contact interface (Figure **1**, contacts **6** and magnetic strip **11**; col. **1**, ll. **43-55**) along with a contactless interface (Figure **1**, circuit **2** with contactless data transfer portion **3**; col. **1**, ll. **43-55**; col. **1**, l. **65** to col. **2**, l. **4**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the card of Cooper in view of Geiselman and in further view of Singh to include a smartcard contact interface as disclosed in Kreft in order to be able to reload or reprogram the data to be written to the magnetic strip (Kreft, col. **2**, ll. **61-63**; Col. **3**, ll. **33-41**) and to be able to transfer data typically stored on a magnetic

stripe wirelessly to relieve the inconvenience of having to determine the correct orientation to slide a magnetic stripe through a card reader (Kreft, col. **3**, ll. **17-22**).

29. Claims 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cooper in view of Geiselman, in further view of Singh, in further view of Teicher, et al. (US Patent No. 6,257,468, hereinafter "Teicher"), and further in view of Kreft.

30. Regarding claims 24 and 26, Cooper discloses sharing a processor in support of the single series of magnetic data on the magnetic stripe (col. **3**, l. **63** to col. **4**, l. **25**).

Cooper in view of Geiselman, in further view of Singh does not specifically disclose that the microprocessor is a crypto-processor and that it is shared in support of a smartcard contact interface. Cooper in view of Geiselman, in further view of Singh further does not specifically disclose using data received by said smartcard interface to affect data presented later by said single series of magnetic data on a magnetic stripe to a legacy card reader.

Teicher discloses a smart card with a cryptographic module in support of an interface that encrypts all communications to a card reader (Figure **10**, electrical contacts [interface] **104**; Figure **11**, encryption/decryption/reader verification module **854**; col. **13**, ll. **52-56**; col. **14**, ll. **28-32**; col. **8**, ll. **36-39**).

Cooper in view of Geiselman, in further view of Singh, further in view of Teicher does not specifically disclose using data received by said smartcard interface to affect data presented later by said single series of magnetic data on a magnetic stripe to a legacy card reader.

Kreft discloses that data written through the contacts on the card affects data presented by the magnetic strip (col. 2, ll. 61-63; col. 3, ll. 33-36)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the card of Cooper in view of Geiselman, further in view of Singh to include a processor to encrypt communications transmitted via a smartcard interface to a reader as disclosed in Teicher in order to prevent unauthorized interception of personal data. Also, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the card of Cooper in view of Geiselman, in further view of Singh, and further in view of Teicher to allow data to be presented on the magnetic strip to be programmed through the contacts on the card as disclosed in Kreft in order to only allow authorized parties to alter the memory of the card (Kreft, Col. 2, ll. 53-64).

Conclusion

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

32. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

Art Unit: 3685

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad A. Nilforoush whose telephone number is (571)270-5298. The examiner can normally be reached on Monday-Thursday 8 am - 5 pm.

34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Calvin Hewitt can be reached on (571)272-6709. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

35. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

Application/Control Number: 10/800,821

Page 15

Art Unit: 3685

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. A. N./

Examiner, Art Unit 3685

/Calvin L Hewitt II/

Supervisory Patent Examiner, Art Unit 3685